

unpatentable over Pandorf in view of U.S. Patent No. 2,753,515 (Rickner). The Office Action also rejects claims 19, 20, 23, and 24 under 35 U.S.C. 103(a) as being unpatentable over Pandorf.

Before addressing the prior art rejections, it is believed to be appropriate to briefly review applicants' invention. The present application teaches providing a heater that includes two resistive heater elements (e.g., elements 350 and 360 of Figure 3A) and using that heater to control the temperature of a pressure transducer. Prior art heaters generally contain only a single heater element and as such are normally only used to heat a pressure transducer to a single temperature. However, as shown for example in Figures 5A-5D, applicants' heaters may heat a pressure transducer to a variety of selected operating temperatures simply by reconfiguring some electrical jumpers. For example, the configuration shown in Figure 5A will heat a transducer to a first operating temperature and the configuration shown in Figure 5B will heat the transducer to a second operating temperature.

Independent claims 1, 15, and 21 stand rejected under 35 U.S.C. 102(e) as being anticipated by Pandorf. Pandorf discloses a variety of heaters that may be used in pressure transducer assemblies. Figure 2A of Pandorf shows an assembly in which a heater 218 is shown attached to a thermal shell 216 and another heater 232 is shown attached to a tube clamp 230. Heater 218 controls the temperature of the pressure sensor 210 and heater 232, along with tube clamp 230, controls the temperature of the inlet tube 214. Figures 3 and 4 of Pandorf show assemblies that include a separate thermal shell 242 for enclosing control electronics. A heater 244 is shown attached to that separate thermal shell 242 and is used to control temperature of the control electronics. Figure 5 shows an assembly including a heater 218 and an auxiliary heater 260. Heater 218 is shown attached to thermal shell 216 and the auxiliary heater 260 is shown attached directly to the pressure sensor 210.

Claim 1 requires "a shell" and "a heater attached to the shell, the heater including a first heating element and a second heating element, the first heating element being characterized by a first electrical resistance, the second heating element being characterized by a second electrical resistance, the first electrical resistance being different than the second electrical resistance". Pandorf does not disclose the claimed combination. For example, referring to Figure 2A of Pandorf, the two heaters are not both attached to the thermal shell (i.e., heater 218 is shown attached to shell 216 but heater 232 is not). Further, Pandorf does not teach providing two

different heating elements characterized by different electrical resistances. Similar comments apply to claims 15 and 21. For at least these reasons, independent claims 1, 15, and 21, and the dependent claims which depend therefrom, are believed to patentably distinguish over Pandorf.

Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf in view of Johnston. Referring to Figure 1 of Johnston, the disclosed pressure sensor 10 includes two heater elements 44, 108. Element 44 is disposed in the upper part of the sensor 10 and the element 108 is disposed in the lower part of the sensor 10. As is discussed in Johnston in column 5, lines 3-9 and column 6, lines 29-41, the heating elements are used to maintain the sensor 10 at a predetermined temperature, such as 50 degrees Celsius. As is noted in the first line of the table in Column 7 of Johnson, the two heater elements are characterized by the same resistance value, i.e., 80 Ohms. Accordingly, Johnston does not teach or suggest providing two different heating elements characterized by different electrical resistances and does not remedy the deficiencies of Pandorf. For at least these reasons, claim 6 is believed to patentably distinguish the combination of Pandorf and Johnston.

Independent claims 18 and 22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf in view of Rickner. As discussed generally above, Pandorf does not disclose a transducer including a shell and a heater attached to the shell in which the heater includes first and second heater elements, as required by claim 18. Further, this deficiency of Pandorf is not remedied by Rickner. Also, as discussed above, the claimed combination allows the transducer to be heated to a variety of operating temperatures simply by reconfiguring some electrical jumpers. This concept is neither taught nor suggested by any of the cited art. For at least these reasons, claim 18 is believed to be patentable over the combination of Pandorf and Rickner. Similar comments apply to independent claim 22.

Finally, dependent claims 19, 20, 23, and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pandorf. As discussed above, independent claims 18 and 22 are believed to patentably distinguish over the combination of Pandorf and Rickner. Accordingly, dependent claims 19, 20, 23, and 24, which depend from independent claims 18 and 22 are also believed to be patentable.

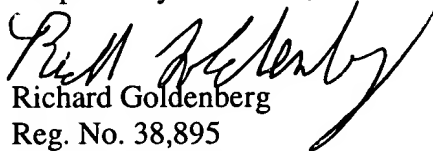
Claims 1-24, the claims remaining in the application, are believed to define allowable subject matter. An early and favorable examination is earnestly solicited. If there are any

remaining issues, the Examiner is urged to contact the undersigned at the telephone number listed below.

No extensions of time are believed to be required for this paper to be timely filed. However, in the event that such an extension of time is required, please also consider this paper as a petition for an extension of time pursuant to 37 CFR 1.136 for any extensions of time necessary for this paper to be timely filed, and please charge the fee required for any such extensions of time to Deposit Account No. 08-0219. No other fees are believed to be due in connection with this paper. However, please charge any fees, or credit any overpayment, that may be due in connection with this paper to Deposit Account No. 08-0219.

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